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SN Officer competes for Airmanship honor

by Grace Janiszewski, Sensors Directorate

HANSCOM AIR FORCE BASE, Mass. — 1st Lt. John W. Fenwick of AFRL's Sensors Directorate has been selected as the AFRL nominee for the 2002 Colonel James Jabara Airmanship Award.

The Jabara Award honors the contributions of an Air Force Academy graduate to airmanship that are of such significance as to set the performer apart from his or her contemporaries.

Fenwick has pioneered image extraction methods for the Infrared Sensor Technology's chromotomographic hyperspectral sensor (CTHIS), which is being employed to address such warfighter needs as missile threat warning, bomb and explosion assessment, and laser threat detection.

He created unique image processing software to analyze multiple targets; devised a tool for identifying secondary explosions; and pioneered a data extraction technique for processing extremely faint signals, enabling a 50 percent improvement in missile plume signature discrimination and target detection.

While developing these advanced image extraction techniques, Fenwick discovered a subtle but significant optical alignment design flaw whose correction eliminated wavelength modulations that had been limiting the accuracy of CTHIS event identification – and, in addition, created a set of algorithms for correcting previous datasets which had been compromised by those modulations.

This design breakthrough elevates CTHIS technology to a level that will provide warfighters with a capability to identify and classify targets on a hot battlefield. @



***1st Lt. John W.
Fenwick***